

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

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FEDERAL COMMUNICATIONS COMMISSION
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MM Docket No. 87-268

In the Matter of)
)
Advanced Television Systems)
and Their Impact Upon the)
Existing Television Broadcast)
Service)

Sixth Further Notice of)
Proposed Rule Making)

REPLY COMMENTS OF THE DIGITAL HDTV GRAND ALLIANCE

I. Introduction

The *digital* HDTV Grand Alliance ("Grand Alliance") hereby replies to the comments filed on November 22, 1996 in response to the Commission's Sixth Further Notice of Proposed Rule Making in its Advanced Television proceeding. The Grand Alliance believes that the Commission can and should act expeditiously to complete the channel allotment and assignment process so that implementation of a terrestrial digital television broadcasting system can proceed in earnest.

II. The Advisory Committee Testing Process and Results Provide a Fully Adequate Basis for Channel Planning.

The Association of Federal Communications Consulting Engineers ("AFCCE") (at 3-7) raises concerns regarding the high transmitter power levels that would be required by attempting to replicate coverage areas of existing low-band VHF analog stations with DTV channels in the UHF band. AFCCE recommends a different approach to defining DTV

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service areas in which the Commission would establish two grades of DTV service: one within a contour defined by the radio horizon, and the other for service beyond the radio horizon in which receivers would utilize a low-noise amplifier “electronically integrated with the DTV receiver, but, perhaps, physically integrated with the receiving antenna.” AFCCE (at 13) also recommends the reestablishment of the Television Allocations Study Organization (originally established by the FCC in 1956) to deal with technical issues on an ongoing basis, offering a fairly elaborate example for the structure of several “panels” to administer such technical activities. AFCCE (at 18) further recommends a two-month extension to the due date for reply comments in order to deal with these issues. Gateway Communications (at 2) urges adoption of a table of DTV allotments, but also asks the Commission to initiate a separate further rule making proceeding pertaining to technical issues such as planning factors, channel and station parameters.

The Grand Alliance believes that the extensive laboratory and field tests conducted by the Commission’s Advisory Committee on Advanced Television Service (“Advisory Committee”) on the Grand Alliance HDTV system provide a fully adequate basis for allotting and assigning DTV channels to broadcasters. To be sure, there are tradeoffs that the Commission must consider in pursuing its goals, but the performance capabilities of the system are known and thoroughly tested, and the necessary information regarding propagation and interference characteristics is in hand. Consequently, the Commission should reject proposals for further study of propagation characteristics, for development of new planning factors, or for additional field tests. In addition, although several implementation issues still remain, existing industry groups, including the Advanced Television Systems Committee

("ATSC"), are fully able to address these issues and to develop required solutions.¹ In particular, we see no need for the Commission to reestablish the Television Allocations Study Organization, since it appears that the functions contemplated for it by AFCCE have either already been fulfilled by the Advisory Committee, or are now being addressed by the ATSC or other industry groups. Similarly, we see no need for any additional rule making proceeding pertaining to DTV technical issues.

AFCCE correctly points out that a preamplifier located at the receiving antenna could facilitate reception under difficult conditions, e.g., at sites beyond the effective radio horizon. Indeed, this is a common, proven technique for reception of distant analog NTSC signals today. For sites within the effective radio horizon, the field tests conducted by the Advisory Committee demonstrate that DTV reception will be successful without a preamplifier. In fact, system calculations and actual field tests showed that there were very substantial margins (against the so-called "cliff effect" of digital transmissions) even at the radio horizon.²

While the use of proven techniques to improve reception at particularly difficult locations should be encouraged, the suggestion that such capabilities (e.g., a receiver-controlled "smart" antenna) should be required for all DTV receivers is inappropriate. First, experience with NTSC broadcasts shows that the market will provide solutions where required that are most economical for consumers, i.e., consumers at locations where reception is particularly difficult will bear the added cost of a solution without burdening the vast

¹ The Broadcasters (at 22, 64) conclude that the transmission emission mask proposed in the Fifth NPRM will not be stringent enough to protect adjacent NTSC channels adequately, and state that they will propose a tighter emission mask after the ATSC completes its work in this area. Members of the Grand Alliance are participating in this work within the ATSC, and we anticipate that the Commission will be able to rely upon the ATSC emission mask recommendation that is expected to be forthcoming within the next few months.

² See "Field Test Results of the Grand Alliance HDTV Transmission Subsystem," submitted to the Field Testing Task Force of the FCC's Advisory Committee on Advanced Television Service, September 16, 1994.

majority of consumers who will be able to receive DTV transmissions with an enormous reception margin. Second, the application of such preamplifiers and other reception enhancement techniques is highly dependent upon the particular circumstances. Finally, DTV receiver designs must balance a number of important requirements, including the need for high performance in the presence of potentially interfering NTSC signals as well as adequate reception of the DTV signal itself. Thus, these decisions should be left to the marketplace which consistently provides the most effective and economical solutions.

III. The Commission Should Not Mandate Receiver Performance Requirements.

Arguing that they and the Commission will fail in their common objectives to replicate NTSC service areas and to minimize interference and disruption, if receivers do not perform at the level called for by the allotment/assignment plan, the Broadcasters (at 64-65) urge the Commission to require equipment manufacturers to design tuners that perform at least to the minimum capabilities of the Grand Alliance system and at the level assumed by the Broadcasters' Modified Table with respect to the 7 dB UHF noise figure. They argue that minimum mandatory receiver standards should require adaptive equalizer circuits, tuner performance, and noise figures necessary to protect the public's DTV signals from interference, and that such a minimal requirement is both technologically and economically feasible for equipment manufacturers. Harris Corporation (at 3) also urges the Commission to require all digital receivers to achieve the minimal interference levels of the Grand Alliance system.

As we explained in our Comments and Reply Comments in the Fifth NPRM, the Grand Alliance members strongly oppose the imposition of FCC requirements on the reception performance of receivers. The same marketplace forces that operate today to

ensure that television manufacturers provide adequate reception performance will continue to motivate manufacturers to compete to provide high-quality receivers. If it is determined that any minimum performance levels need to be established for DTV receivers, they should be the subject of voluntary industry standards, just as they have been with the current analog system for many years.

IV. An Inter-Industry Group Should Develop a DTV Channel Labeling Scheme.

Responding to the Commission's inquiry regarding a scheme for labeling DTV channels, the Broadcasters (at 5, 66) state that this is an extremely important issue that, if handled thoughtfully, can significantly minimize viewer disruption and confusion during the transition to DTV, and that the most fundamental element to any labeling scheme should be maintaining channel identity. They also argue that viewers should be readily able to identify the DTV channels corresponding to their NTSC stations both during and after the transition, that the DTV channel label should not be tied to the DTV frequency, that channel labels should be as brief and simple as possible, and that stations should have the ability to maintain their identity across the carriers of their signals.

The Broadcasters do not comment on specific suggestions, but recommend the creation as soon as possible of an inter-industry committee, including representatives of the broadcasting, equipment manufacturing, and cable industries, to explore this very important issue. They note that the ATSC has recognized this need and may undertake the work. The Broadcasters say that working within time frames established by the Commission, and separate from this channel allotment/assignment proceeding, such a committee should:

- 1) evaluate viewer perception of and broadcaster reaction to labeling options; 2) consider equipment changes necessary to accommodate and to display various labeling schemes; and

3) make a recommendation to the Commission. Public Television (at 42) concurs with the Broadcasters' recommendation to organize such a committee to recommend a frequency labeling scheme to the Commission.

The Grand Alliance agrees that a committee comprised of representatives of all interested industries ought to develop a DTV channel labeling scheme. Because the ATSC includes representatives of the broadcasting, equipment manufacturing, and cable industries, as well as other industries that may well have an interest, we believe that it is ideally suited to undertake this effort. Indeed, on January 14, 1997 the ATSC initiated such a project, and stated its intention to complete this work within the next few months. We understand that this committee will also evaluate and recommend to the Commission the extent to which the DTV channel labeling scheme can be developed and implemented as a voluntary industry standard as opposed to being embodied in the Commission's rules. The Commission should monitor the work of this committee and evaluate its recommendation to ensure that the public's needs are fully met.

V. Issues Regarding Use of the DTV Channel Have Already Been Fully Explored in the Fourth NPRM.

The National Cable Television Association ("NCTA") (at 1-3) states that the channel allocation scheme should be based on the Commission's goal to allocate each broadcaster *one* digital program service channel, and that if the goal shifts to permit flexibility for broadcasters to provide *multiple* programs, then NCTA would support auctioning any new spectrum above and beyond that needed for a single channel.

The issues regarding flexible use of DTV channels have been thoroughly examined in the Fourth NPRM, which is now ripe for a final decision by the Commission. As we explained

in detail in our Comments and Reply Comments on the Fourth NPRM, HDTV is the only DTV application that requires a full 6 MHz channel, and we believe that HDTV should be and will be the centerpiece application of DTV service. However, we also argued that once significant amounts of HDTV programming are provided, broadcasters should be given great flexibility in their use of the DTV channel, e.g., to provide opportunistic data services along with HDTV programming, or to offer other data services or multiple programs of SDTV at other times. We believe that broadcasters will offer substantial amounts of HDTV programming; indeed, they have clearly stated their intention to do so. Assuming this is the case, we believe they should be afforded wide flexibility in their use of the channel.

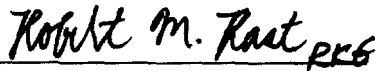
Press Broadcasting attaches to its comments a Petition for Rule Making proposing rules governing the flexible use of DTV channels and permitting broadcasters to keep *both* channels if they construct DTV facilities and offer full HDTV or multiple SDTV programs free on a timely basis. This proposal should be rejected as an untimely attempt to reopen issues thoroughly addressed in the Fourth NPRM and to modify the Commission's simulcast transition plan whereby broadcasters would be *loaned* the use of a second channel for the purposes of converting to digital television. In addition, Press Broadcasting's proposal would violate Section 201 of the Telecommunications Act of 1996 which expressly requires that one of the two channels be surrendered. The Commission must not permit reconsideration of well-settled policy issues to delay the rapid introduction of digital broadcast television.

VI. Conclusion

Accordingly, the Commission should act as expeditiously as possible to complete the channel allotment and assignment process so that implementation of a terrestrial digital television broadcasting system can proceed in earnest.

Respectfully submitted,


The Digital HDTV Grand Alliance

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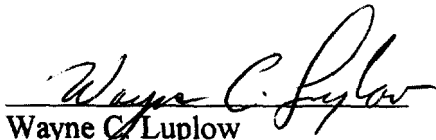
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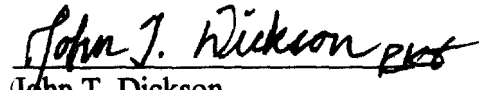
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